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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,672	02/21/2006	Klaus Satzke	AVAN/000309US	4624
47389	7590	06/19/2006		
PATTERSON & SHERIDAN, LLP 3040 POST OAK BLVD SUITE 1500 HOUSTON, TX 77095				
EXAMINER HASAN, MOHAMMED A				
ART UNIT		PAPER NUMBER		
2873				

DATE MAILED: 06/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/536,672		SATZKE, KLAUS	
	Examiner		Art Unit	
	Mohammed Hasan		2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
 4a) Of the above claim(s) 7-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/27/2005</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-6 are drawn to a focusing device, classified in class 359, subclass 652.
 - II. Claims 7-10 are drawn to method of fabricating focusing device by nano-imprint or lithography, classified in class 430, subclass 313.
 2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case product claimed can be made by different process such as ion-exchange techniques.
 3. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.
 4. During a telephone conversation with Walter C. Grollitsch on June 7, 2006 a provisional election was made without traverse to prosecute the invention of I, claims 1-6.
6. Affirmation of this election must be made by applicant in replying to this Office action.

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Claims 7-10 are withdrawn from further consideration by the examiner, 37
CFR 1.142(b), as being drawn to a non-elected invention.

Priority

5. *Receipt of acknowledged of papers submitted under 35 U.S.C. 119 (a) – (d),
which papers have placed in the file.*

Oath/Declaration

6. Oath and declaration filed on 2/21/2006 is accepted.

Information Disclosure Statement

7. The prior art documents submitted by applicant in the Information Disclosure Statement filed on 5/27/2005 have all been considered and made of record (note the attached copy of form PTO – 1449).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3,5,and 6 are rejected under 35 U.S.C.102 (e) as being anticipated by Russell et al (6,990,282 B2).

Regarding claim 1, Russell et al discloses (refer to figure 3) a focusing device (i.e., a photonic crystal fiber) with a refractive index profile changing from the center of the focusing device towards its perimeter (as shown in figure 3), characterized in that the lateral refractive index distribution of the focusing device material is homogeneous and the focusing device comprises holes (70 and 60) (column 6, lines 18-27) for introducing a graded refractive index profile (column7, line 67).

Regarding claim 2, Russell et al discloses (refer to figure 2) the density of holes (40) increases towards the periphery of the focusing device (column 6, lines 7-16).

Regarding claim 3,Russell et al discloses, the holes (40) are distributed at random (as shown in figure 2).

Regarding claim 5, Russell et al discloses (refer to figure 1) the focusing device comprises at least two layers (core layer 10 and cladding layer 20) deposited on a substrate (30) (column 5, lines 62-67).

Regarding claim 6, Russell et al discloses, a device comprising a focusing device (i.e., lens is a focusing device, column 3, lines 11-14).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Russell et al (6,990,282 B2) in view of White (6,594,429 B1).

Regarding claim 4 as applied to claim 1, Russell et al discloses (refer to figure 3) a focusing device (i.e., a photonic crystal fiber) with a refractive index profile changing from the center of the focusing device towards its perimeter (as shown in figure 3), characterized in that the lateral refractive index distribution of the focusing device material is homogeneous and the focusing device comprises holes (70 and 60) (column 6, lines 18-27) for introducing a graded refractive index profile (column 7, line 67).

Russell et al discloses all of the claim limitations except holes are distributed according to Monte Carlo algorithm (i.e., applicant explain in the specification holes are distributed randomly is Monte Carlo algorithm way).

However, within the same field of endeavor, White teaches (refer to figure 1) holes distribution randomly (column 4, lines 52-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a fiber with holes distribution method in to the Russell a

photonic crystal fiber for the purpose of higher order modes see a higher volume fraction of air travel faster than the lower order modes that are closer to the core as taught by White (column 3, lines 56-59).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammed Hasan whose telephone number is (571) 272-2331. The examiner can normally be reached on M-TH, 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky L Mack can be reached on (571) 272- 2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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MH
June 8, 2006

M. Hasan
Mohammed Hasan
Examiner, AU - 2873